WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTERS PATENT OF THE UNITED STATES IS:

1. A method for providing multi-user access to a packet switched network, the method comprising:

5   executing a communication software on a plurality of end user stations that communicate over a local area network (LAN) supporting an Ethernet-based LAN protocol, the communication software being based upon a communication protocol that establishes a point-to-point communication session;

generating packets by the plurality of end user stations based upon the communication

10 protocol;

selectively encapsulating the communication protocol packets using the Ethernet-based LAN protocol;

transmitting the encapsulated packets by a customer premise equipment (CPE) that is coupled to the LAN;

15 simultaneously carrying the point-to-point communication sessions over a communication channel;

terminating the point-to-point communication sessions at a remote access server; and

recovering the packets and forwarding the packets to the packet switched network.

2. The method according to claim 1, wherein the communication protocol in the

20 executing step is Point-to-Point Protocol (PPP).

3. The method according to claim 1, wherein the CPE in the step of transmitting is a digital subscriber line (DSL) modem.

4. The method according to claim 1, wherein the communication channel in the step of simultaneously carrying exists over an ATM network.

5. The method according to claim 4, further comprising assigning a Permanent Virtual Circuit (PVC) associated with the ATM network to the CPE.

6. The method according to claim 5, further comprising mapping the point-to-point communication sessions to distinct VPI/VCIs (Virtual Path Identifier/Virtual Connection Identifier).

7. The method according to claim 1, further comprising dynamically selecting network services.

8. The method according to claim 1, wherein the packets conform with Ethernet V2 format.

9. The method according to claim 1, further comprising processing individual accounting information for each of the plurality of end user stations.

10. A communication system for providing multi-user access to a packet switched network, the communication system comprising:

a local area network (LAN) supporting an Ethernet-based LAN protocol;

a plurality of end user stations connected to the LAN, each of the plurality of end user stations executing a communication software that is based upon a communication protocol that establishes a point-to-point communication session, the plurality of end user stations generating packets based upon the communication protocol, each of the plurality of end user stations selectively encapsulating the communication protocol packets using the Ethernet-based LAN protocol;

a customer premise equipment (CPE) coupled to the LAN and configured to transmit the encapsulated packets;

a line terminating equipment communicating with the CPE;

a multiplexer/demultiplexer coupled to the line terminating equipment and configured to receive the point-to-point communication sessions, the multiplexer/demultiplexer simultaneously carrying the point-to-point communication sessions over a communication channel;

a remote access server communicating with the multiplexer/demultiplexer and configured to terminate the point-to-point communication sessions, the remote access server recovering the packets and forwarding the packets; and

a router coupled to the remote access server and configured to receive the packets, the router forwarding the packets to the packet switched network.

11. The system according to claim 10, wherein the communication protocol is Point-to-Point Protocol.

12. The system according to claim 10, wherein the CPE is a digital subscriber line (DSL) modem and the line terminating equipment is a DSL access multiplexer (DSLAM).

13. The system according to claim 12, wherein the multiplexer/demultiplexer is an ATM switch.

14. The system according to claim 13, wherein the communication channel is a Permanent Virtual Circuit (PVC), the PVC being associated with the CPE.

15. The system according to claim 14, wherein the point-to-point communication sessions are individually mapped to distinct VPI/VCIs (Virtual Path Identifier/Virtual Connection Identifier).

16. The system according to claim 10, wherein each of the plurality of end user stations dynamically selects network services.

17. The system according to claim 10, wherein the packets conform with Ethernet V2 format.

18. The system according to claim 10, wherein the remote access server processes individual accounting information for each of the plurality of end user stations.

19. A computer-readable medium carrying one or more sequences of one or more instructions for providing multi-user access to a packet switched network, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

executing a communication software on a plurality of end user stations that communicate over a local area network (LAN) supporting an Ethernet-based LAN protocol, the communication software being based upon a communication protocol that establishes a point-to-point communication session;

generating packets by the plurality of end user stations based upon the communication protocol;

selectively encapsulating the communication protocol packets using the Ethernet-based LAN protocol; and

transmitting the encapsulated packets by a customer premise equipment (CPE) that is coupled to the LAN.

20. The computer-readable medium according to claim 19 wherein the communication protocol in the executing step is Point-to-Point Protocol (PPP).

21. The computer-readable medium according to claim 19, wherein the CPE in the step of transmitting is a digital subscriber line (DSL) modem.

22. The computer-readable medium according to claim 19, further comprising dynamically selecting network services.

23. The computer-readable medium according to claim 19, wherein the packets conform with Ethernet V2 format.